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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/670,559	09/26/2003	Tsuyoshi Kaneko	116945	8128

25944 7590 07/05/2005

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EXAMINER

NASRI, JAVAID H

ART UNIT PAPER NUMBER

2839

DATE MAILED: 07/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/670,559

Applicant(s)

KANEKO, TSUYOSHI

Examiner

Javaid Nasri

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2839

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 04 April 2005.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-16 and 18-31 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 and 18-31 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 16, 18-26 and 28-31 are rejected under 35 U.S.C. 102(b) as being anticipated by Okada et al. (6,065,881).

Okada et al discloses, **for claim 16**, a convex part (21) provided on a substrate (1, 2); and an optical waveguide part (40) provided solely on the convex part, the convex part having a lower refractive index than the optical waveguide pad, (PMMA has refractive index as 1.49, refer col. 8, lines 46-49 and Polyarylate has refractive index as 1.6, refer col. 9, lines 21-33, and according to claim 10 the material could be either PMMA or Polyarylate), **for claim 18**, a covering layer (20C) being formed around the optical waveguide (40), and the refractive index of the convex part and the refractive index of the covering layer are approximately equal (can be same material, see claim 10), **for claim 19**, the convex part being integrally formed with the substrate, **for claim 20**, a cross-section of the optical waveguide part being in the shape of a truncated oval (see marked figure 8, attached), **for claim 21**, a cross-section of the optical waveguide part being in the shape of a circle (see marked figure 8, attached), **for claim 22**, an upper surface of the convex part being a curved surface (see marked figure 8, attached), **for claim 23**, an angle made between an upper surface of the convex part and a surface that contacts the upper surface on a

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side part of the convex part being acute (see marked figure 8, attached), **for claim 24**, an upper part of the convex part being formed in an inversely tapered shape (see figure 8), **for claim 25**, the optical waveguide being buried under a layer (20C) with a lower refractive index than the optical waveguide part (PMMA has refractive index as 1.49, refer col. 8, lines 46-49 and Polyarylate has refractive index as 1.6, refer col. 9, lines 21-33, and according to claim 10 the material could be either PMMA or Polyarylate), **for claim 26**, a first convex part (21) provided on a substrate (1, 2); an optical waveguide part (40) provided solely on an upper surface of the first convex part, a second convex part (22, "convex" is interpreted as part of the name) disposed in parallel with the first convex part; and a covering layer (20C, see figure 18B) that covers an optical waveguide part and is provided in part on an upper surface of the second convex part, **for claim 28**, an IC (2); and an optical element, **for claim 29**, an optical waveguide (40), **for claim 30**, an optical module (404), **for claim 31**, a convex part (21) provided on a substrate; and an optical waveguide part provided solely on the convex part, the convex part being disposed in parallel with the optical waveguide part (depend which part of the convex part is compared with which part of the optical waveguide).

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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4. Claims 1-15 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Okada et al.

Okada et al discloses all the limitations of claim 26 and all the structural limitations of claims 1-15, as shown above,

However, Okada et al does not disclose:

- a) For claim 27, two of the second convex part. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have two of the second convex part, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8.
- b) In regard to claims 1-15, the claimed method language is counter part of the apparatus claimed. Therefore, it would have been obvious to one ordinary skill in the art at the time the invention was made to develop a particular method for the disclosed apparatus of the cited references.

#### ***Response to Arguments***

5. Applicant's arguments filed on 4/4/2005 have been fully considered but they are not persuasive.

Regarding applicant's comment:

- a) Okada does not disclose an "optical waveguide part provided solely on the convex part". It should be noted that looking at figure 8, it clearly shown that the optical waveguide part (40) provided solely on the convex part (21).

***Information Disclosure Statement***

6. The information disclosure statement filed 5/9/2005 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered. Applicant has not provided with the copies of the foreign documents.

***Conclusion***

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

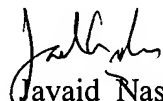
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**Contact**

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Javaid Nasri whose telephone number is 571 272 2095. The examiner can normally be reached on Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tulsidas C. Patel can be reached on 571 272 2800 ext 39. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Javaid Nasri  
Primary Examiner  
Art Unit 2839

JN  
Jhn  
June 29, 2005

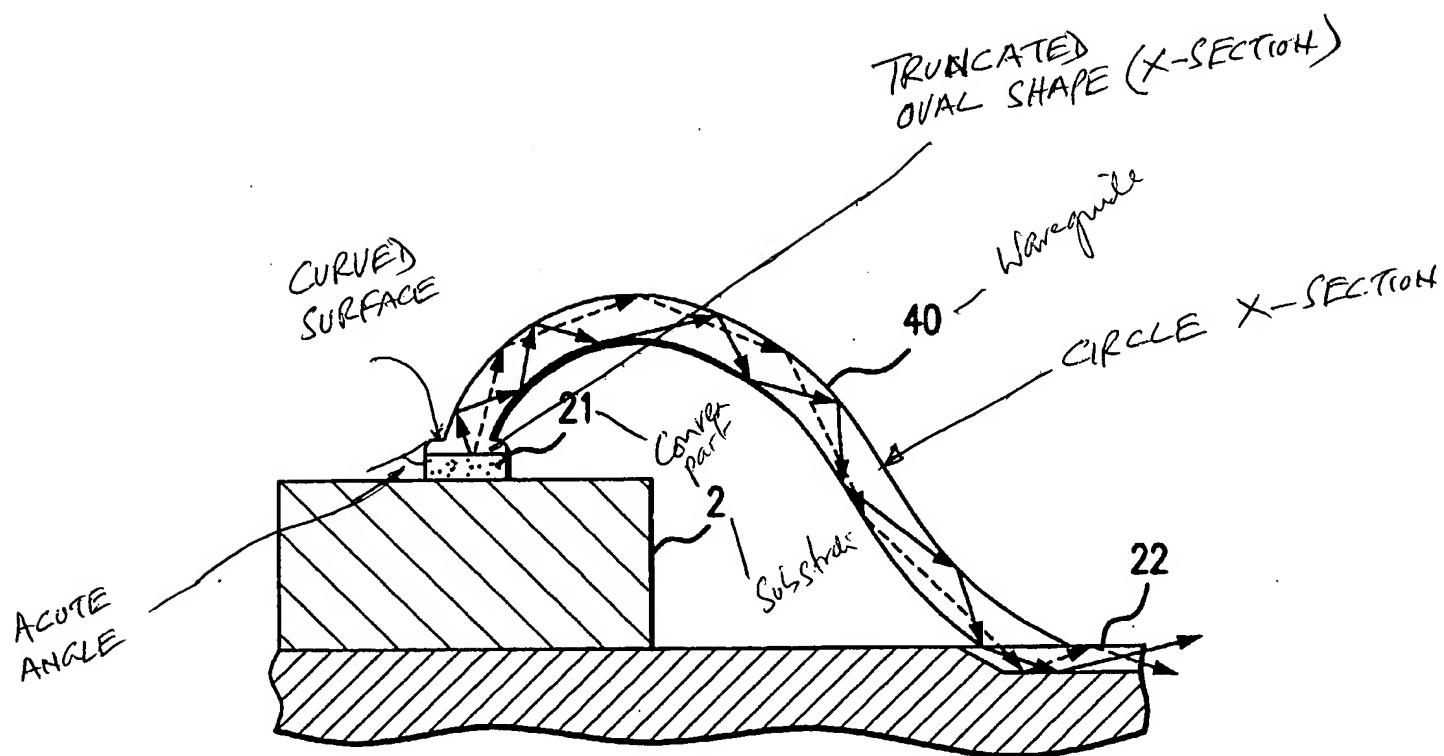


FIG. 8